# SEMICONDUCTOR NANOCRYSTAL COMPOUNDS AND METHODS OF USE OF SAID COMPOUNDS FOR TREATING A MATERIAL

## ABSTRACT

A semiconductor nanocrystal compound and probe are described. The compound is capable of linking to one or more affinity molecules. The compound comprises (1) one or more semiconductor nanocrystals capable of, in response to exposure to a first energy, providing a second energy, and (2) one or more linking agents, having a first portion linked to one or more semiconductor nanocrystals and a second portion capable of linking to one or more affinity molecules. One or more semiconductor nanocrystal compounds are linked to one or more affinity molecules to form a semiconductor nanocrystal probe capable of bonding with one or more detectable substances in a material being analyzed, and capable of, in response to exposure to a first energy, providing a second energy. Also described are processes for respectively: making the semiconductor nanocrystal compound; making the semiconductor nanocrystal probe; and treating materials with the probe.